

Message

---

**From:** Carpenter, Angela [Carpenter.Angela@epa.gov]  
**Sent:** 6/26/2017 4:00:45 PM  
**To:** Vaughn, Stephanie [Vaughn.Stephanie@epa.gov]; Griffiths, Rachel [griffiths.rachel@epa.gov]; Sivak, Michael [Sivak.Michael@epa.gov]; Donovan, Betsy [Donovan.Betsy@epa.gov]; Fajardo, Juan [Fajardo.Juan@epa.gov]; Clemetson, Michael [Clemetson.Michael@epa.gov]  
**Subject:** RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

Good thought – PRBs aren't exactly cutoff walls.

---

**From:** Vaughn, Stephanie  
**Sent:** Monday, June 26, 2017 11:57 AM  
**To:** Griffiths, Rachel <griffiths.rachel@epa.gov>; Carpenter, Angela <Carpenter.Angela@epa.gov>; Sivak, Michael <Sivak.Michael@epa.gov>; Donovan, Betsy <Donovan.Betsy@epa.gov>; Fajardo, Juan <Fajardo.Juan@epa.gov>; Clemetson, Michael <Clemetson.Michael@epa.gov>  
**Subject:** RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

Good point about GW option #5. I think the solution might be to call it treatment through a PRB, rather than containment.

---

**From:** Griffiths, Rachel  
**Sent:** Monday, June 26, 2017 9:01 AM  
**To:** Carpenter, Angela <Carpenter.Angela@epa.gov>; Vaughn, Stephanie <Vaughn.Stephanie@epa.gov>; Sivak, Michael <Sivak.Michael@epa.gov>; Donovan, Betsy <Donovan.Betsy@epa.gov>; Fajardo, Juan <Fajardo.Juan@epa.gov>; Clemetson, Michael <Clemetson.Michael@epa.gov>  
**Subject:** RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

Added in blue below. GW option #5 is based on containment goal – should that be retained?

---

**From:** Carpenter, Angela  
**Sent:** Monday, June 26, 2017 8:45 AM  
**To:** Vaughn, Stephanie <Vaughn.Stephanie@epa.gov>; Sivak, Michael <Sivak.Michael@epa.gov>; Donovan, Betsy <Donovan.Betsy@epa.gov>; Griffiths, Rachel <griffiths.rachel@epa.gov>; Fajardo, Juan <Fajardo.Juan@epa.gov>; Clemetson, Michael <Clemetson.Michael@epa.gov>  
**Subject:** RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

I have a bit of concern with not targeting the MCLs and GWQS at least initially. This is a bit awkward since they don't have a waste management unit per se (are we treating some areas of the site as if they are?). If you are looking to do a waiver in the future, HQ has been stressing that this be the last option rather than the first.

- 1- Restore groundwater to its expected beneficial use to the extent practicable by reducing contaminant concentrations below the more stringent of federal MCLs and NJ GWQS.

---

**From:** Vaughn, Stephanie  
**Sent:** Friday, June 23, 2017 5:23 PM  
**To:** Sivak, Michael <Sivak.Michael@epa.gov>; Donovan, Betsy <Donovan.Betsy@epa.gov>; Griffiths, Rachel <griffiths.rachel@epa.gov>; Fajardo, Juan <Fajardo.Juan@epa.gov>; Clemetson, Michael <Clemetson.Michael@epa.gov>  
**Cc:** Carpenter, Angela <Carpenter.Angela@epa.gov>  
**Subject:** RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

I was just finally sending my comments, so added them to Michael's below (in green).

Thanks

---

**From:** Sivak, Michael

**Sent:** Friday, June 23, 2017 5:06 PM

**To:** Donovan, Betsy <Donovan.Betsy@epa.gov>; Vaughn, Stephanie <Vaughn.Stephanie@epa.gov>; Griffiths, Rachel <griffiths.rachel@epa.gov>; Fajardo, Juan <Fajardo.Juan@epa.gov>; Clemetson, Michael <Clemetson.Michael@epa.gov>

**Cc:** Carpenter, Angela <Carpenter.Angela@epa.gov>

**Subject:** RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

Please see my comments below.

Michael Sivak

212.637.4310

---

**From:** Donovan, Betsy

**Sent:** Monday, June 12, 2017 10:55 AM

**To:** Vaughn, Stephanie <Vaughn.Stephanie@epa.gov>; Griffiths, Rachel <griffiths.rachel@epa.gov>; Sivak, Michael <Sivak.Michael@epa.gov>; Fajardo, Juan <Fajardo.Juan@epa.gov>; Clemetson, Michael <Clemetson.Michael@epa.gov>; Jill McKenzie (Jill.McKenzie@dep.nj.gov) <Jill.McKenzie@dep.nj.gov>; Hagerman, Paul <HagermanPR@cdmsmith.com>; Darpinian, Amy F NWK (Amy.F.Darpinian@usace.army.mil) <Amy.F.Darpinian@usace.army.mil>; George Molnar (George.Molnar@fws.gov) <George.Molnar@fws.gov>

**Cc:** Carpenter, Angela <Carpenter.Angela@epa.gov>

**Subject:** FW: Rolling Knolls - proposed RAOs and Remedial Alternatives

Rolling Knolls Reviewers – Please see the following message with the PRPs proposed Remedial Action Objectives (RAOs) and Remedial Alternatives which will be included in the Feasibility Study. Please provide comments by June 26<sup>th</sup>. If you would like to discuss any comments prior to submitting a response, please let me know. Thank you for your assistance.

---

**From:** John Persico [mailto:JPersico@Geosyntec.com]

**Sent:** Monday, June 12, 2017 8:15 AM

**To:** Donovan, Betsy <Donovan.Betsy@epa.gov>

**Cc:** Ricci, Richard F. <RRicci@lowenstein.com>; mfaigen@issuesllc.com; Richman-La Londe, Alexa <ALALONDE@RIKER.com>; 'Fisher, Gary (Nokia - US/Murray Hill)' <gary.fisher@nokia.com>; Brian Bergeron <pete.bergeron@chevron.com>; Richard T. Hughes <rhughes@jw.com>; Irvin M. Freilich <IFreilich@gibbonslaw.com>; Jim O'Meara <james.omeara@novartis.com>; Michael Draikiwicz <MDraikiwicz@enviro-sciences.com>; Nancy Eichinger <nancy.eichinger@novartis.com>; Robb Truedinger <robb.truedinger@novartis.com>; Robert A. Malinoski <RMalinoski@chevron.com>; Shawn LaTourette <SLaTourette@gibbonslaw.com>; Sofina Mirza-Reid <sofina.mirza-reid@novartis.com>; Goldfarb, Steven <steven.goldfarb@novartis.com>; Adame Winningham, Nikki <nadame@lowenstein.com>; Steven Poirier <SPoirier@Geosyntec.com>

**Subject:** Rolling Knolls - proposed RAOs and Remedial Alternatives

Betsy, as I indicated in my email on June 8, 2017, we are providing new proposed Remedial Action Objectives (RAOs) and Remedial Alternatives for review by USEPA. These are based on your comments on the RAOs and Remedial Alternatives in the Development and Screening of Remedial Alternatives Technical Memorandum (DSRA Tech Memo) and on subsequent discussions between USEPA and the Rolling Knolls Group.

**RAOs (There is no eco risk from SW or sediment, right? If there is, they'd need an RAO for these media. And do we need to include something about preventing impact to SW and Sediment?)**

1. Prevent or minimize current and potential future unacceptable risks to human and ecological receptors through direct contact or ingestion of contaminated soil.
2. Control source areas to prevent or minimize (if it's only minimize, that means there will still be an ongoing source to GW, so GW couldn't achieve ARARS, which would mean a TI waiver somewhere down the line. Suggest removing "or minimize"; perhaps replace with "prevent to the extent practicable"?) impacts to groundwater.
3. Prevent or minimize (see above) current and potential future unacceptable risks to human receptors through ingestion of contaminated groundwater.
4. Restore groundwater to its expected beneficial use to the extent practicable ~~by reducing contaminant concentrations below the more stringent of federal MCLs and NJ GWQS.~~

## **Remedial Alternatives**

**Soil (no future use scenario)** [This should not be "no future use". It should be "Trespasser Scenario" or "Recreational Trespasser Scenario" ....whatever we end up calling it. Also, I think we could end up with a mixture of these options, such as excavation of some hot spots, consolidation in some areas, and capping in others.]

1. No Action
2. Site Controls: I'm assuming site controls includes both ICs and ECs, which is likely the fences they mentioned. These should be listed separately.
3. Site Controls and Capping of Selected Areas to Reduce Overall Risk
4. Site Controls, Consolidation of Selected Materials, and Capping of Selected Areas to Reduce Overall Risk
5. Site Controls, Excavation, and Off-Site Disposal of Selected Areas to Reduce Overall Risk

**Soil (residential future use scenario)** [I think there could be a mixture of these two, some capping and some excavation/disposal]

1. Site Controls and Capping of All Landfill Material in the Developable Area of the Site
2. Excavation and Off-Site Disposal of All Landfill Material in the Developable Area of the Site

## **Groundwater**

1. No Action
2. Monitored Natural Attenuation (MNA) with Source Control
3. Biological Treatment and MNA with Source Control
4. In-Situ Chemical Oxidation [should we keep this more general, as in-situ treatment, or is ISCO the only viable option? Agree -- in situ reduction/precipitation could work too] and MNA with Source Control
5. Containment Using a Permeable Reactive Wall and MNA with Source Control Should this contingency be used since it references a containment goal?

Note that by "source control" in the groundwater remedial alternatives, we are referring to the buried materials observed at Test Pit TP-09, upgradient of well MW-3, or similar buried source materials. [I don't think we should be so specific in the FS, but these could be included as examples. There may be other areas determined during a PDI.]

Please let me know if you have any questions or want to discuss these.

John L. Persico, P.G.  
Principal  
609 493 9008 (office)  
609 903 6227 (cell)



engineers | scientists | innovators